

## SYSTEMS AND METHODS FOR SEVERING ELONGATED MATERIAL

### ABSTRACT OF THE DISCLOSURE

Systems and methods for severing elongated material include a  
5 rotatable first roll having a first severing structure, a rotatable second roll having a  
second severing structure corresponding with the first severing structure for severing  
a length of the filament positioned between the rolls, a drive system operable to  
independently rotate the first roll and the second roll according to a drive command,  
a sensor system operable to make measurements and generate actual position  
10 signals representative of an actual current rotational position of the first roll and an  
actual current rotational position of the second roll, and a control system for receiving  
the position signals and operable to generate the drive command in accordance with  
predetermined control parameters and based on the actual rotational position  
signals, wherein the drive command synchronizes the respective rotational  
15 positioning of the first roll and the second roll.